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1. (Once Amended) A method for etching a pattern on a workpiece, comprising:
selecting a workpiece with a hard mask deposited over a layer to be etched, which hard mask is comprised of a reactive metal, the hard mask further defining a pattern including at least one portion having a critical dimension; and
processing the workpiece in a reactor by exposing the entire hard mask to an etch;
whereby the layer is etched corresponding to the pattern of the hard mask, and the growth of the layer during the etch is minimized in the portion of the layer corresponding to the critical dimension.

42. (New) The method of claim 1, wherein:
said selecting step includes selecting a workpiece having a hard mask, which hard mask comprises of one of titanium, aluminum, and tantalum.

43. (New) The method of claim 1, further comprising:
exposing the hard mask to a stream of oxidizing gas in the reactor prior to said etch step.

44. (New) The method of claim 1, further comprising:
exposing the hard mask to a stream of oxidizing gas in the reactor during said etch step.

45. (New) The method of claim 1, further comprising:
exposing the hard mask to an oxidizing stream comprising of one of oxygen, nitrogen, fluorine, boron, and carbon gas, and any combination of oxygen, nitrogen, fluorine, boron, and carbon gas, in the reactor prior to or during said etch step.

46. (New) The method of claim 1, wherein :
said selecting step includes selecting a workpiece with a lithographic layer covering the hard mask.

47. (New) The method of claim 1, wherein:
said selecting step includes selecting a substrate having a hard mask which is readily oxidizable.

48. (New) The method of claim 1, wherein:
said selecting step includes selecting a substrate with a hard mask, which hard mask is comprised of a metal with a low sputtering yield.

49. (New) The method of claim 1, further comprising: